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CLAIMS

1. Process for making high-performance polyethylene multifilament yarn comprising the steps of
   a) making a solution of ultra-high molar mass polyethylene in a solvent;
   b) spinning of the solution through a spinplate containing a plurality of spinholes into an air-gap to form fluid filaments, while applying a draw ratio DR_{fluid};
   c) cooling the fluid filaments to form solvent-containing gel filaments;
   d) removing at least partly the solvent from the filaments; and
   e) drawing the filaments in at least one step before, during and/or after said solvent removing, while applying a draw ratio DR_{solid},
   characterized in that in step b) a fluid draw ratio $DR_{fluid} = DR_{sp} \times DR_{ag}$ of at least 50 is applied, wherein DR_{sp} is the draw ratio in the spinholes and DR_{ag} is the draw ratio in the air-gap, with DR_{sp} greater than 1 and DR_{ag} at least 1.

2. Process according to claim 1, wherein the spinplate contains at least 100 spinholes.

3. Process according to claim 1 or 2, wherein the spinhole has a geometry comprising a contraction zone, with a gradual decrease in diameter from diameter D_0 to D_n with a cone angle in the range 8-75°, and wherein the spinhole comprises a zone of constant diameter D_n with a length/diameter ratio L_n/D_n of from 0 to at most 25 downstream of a contraction zone.

4. Process according to any one of claims 1-2, wherein the cone angle is from 10 to 60°.

5. Process according to any one of claims 1-3, wherein the draw ratio in the spinholes is at least 5.

6. Process according to claim 5, wherein the draw ratio in the spinholes is at least 10.

7. Process according to any one of claims 1-5, wherein the spinhole further comprises a zone of constant diameter D_n downstream of a contraction zone, this zone having a length/diameter ratio L_n/D_n of at most 20.

8. Process according to claim 6, wherein the ratio L_n/D_n is at most 15.

9. Process according to any one of claims 1-7, wherein the spinhole further comprises an inflow zone of constant diameter of at least D_0, with a ratio L_0/D_0 of at least 5.

10. Process according to claim 8, wherein the ratio L_0 / D_0 is at least 10.

11. Process according to any one of claims 1-10, wherein a spinplate comprising at least 10 spinholes, each cylindrical spinhole having a inflow zone of constant diameter D_0 with L_0 / D_0 at least 10, a contraction zone with cone angle in the range 10-60°, and a downstream zone of constant diameter D_n with L_n / D_n at most 15 is applied.

12. Process according to any one of claims 1-10, wherein the fluid draw ratio DR_{fluid} applied to fluid filaments is at least 100.

13. Process according to any one of claims 1-11, wherein a 3-15 mass% solution of linear UHPE of IV 15-25 dl/g is spun through a spinplate containing at least 10 spinholes into an air-gap, the spinholes comprising a contraction zone with a cone angle in the range 10-60° and comprising a zone of constant diameter D_n with a length/diameter ratio L_n / D_n smaller than 10 downstream of a contraction zone, while applying a fluid draw ratio $DR_{fluid} = DR_{sp} \times DR_{ag}$ of at least 100 and a draw ratio DR_{solid} of between 10 and 30.

14. Spinplate comprising at least 10 spinholes of geometry as defined in any one of claims 3-13.

15. Spinplate according to claim 14 containing at least 100 spinholes.